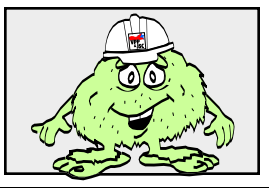
National Aeronautics and Space Administration

Lyndon B. Johnson Space Center
Houston, Texas



Safety education

Education is a vital link in the safety chain and JSC is expanding awareness, training. Story on Page 3.

Kids Space Place

Space Center Houston's newest addition will open next month, and volunteers are needed. Story on Page 4.

Space News Roundup

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Pilot program to enhance office support

Teamwork was the hallmark of a recent secretarial pilot program designed to test a new approach to providing better coverage and customer service, while giving secretaries flexibility in performing tasks and arranging schedules.

Response to the innovative approach by participating secretaries in the Aeroscience and Flight Mechanics Division has been overwhelmingly positive, in spite of some initial skepticism.

"Team members assumed greater responsibilities, more challenges and were involved in areas where they might not have been involved before," said Earlene Miner, team lead.

Aeroscience and Flight Mechanics Division Chief Aldo Bordano said the arrangement allowed the Office Support Team of six secretaries to do the work of nine. Each secretary chose an area of expertise (travel, correspondence, timecards, etc.) on which they could give guidance to other members of the team.

In addition, the team members helped each other provide common support to customers for tasks such as photocopying and preparing correspondence. The team made use of a central in box, from which any one could pull a job and get it done.

"Any one of the team members can walk by, see there's a job to do and go do it," Miner explained.

Not only were the secretaries able to provide better office coverage and customer service, they also gained greater flexibility in performing tasks and arranging schedules. One improvement the concept brought was the ability to spread the workload and cover absences due to training, annual leave or illness, Miner said.

"In the past, if a secretary was in training or on leave, personnel would either delay having clerical work performed or do it themselves," Miner said. "Now, personnel can at all times find a team member to perform these duties."

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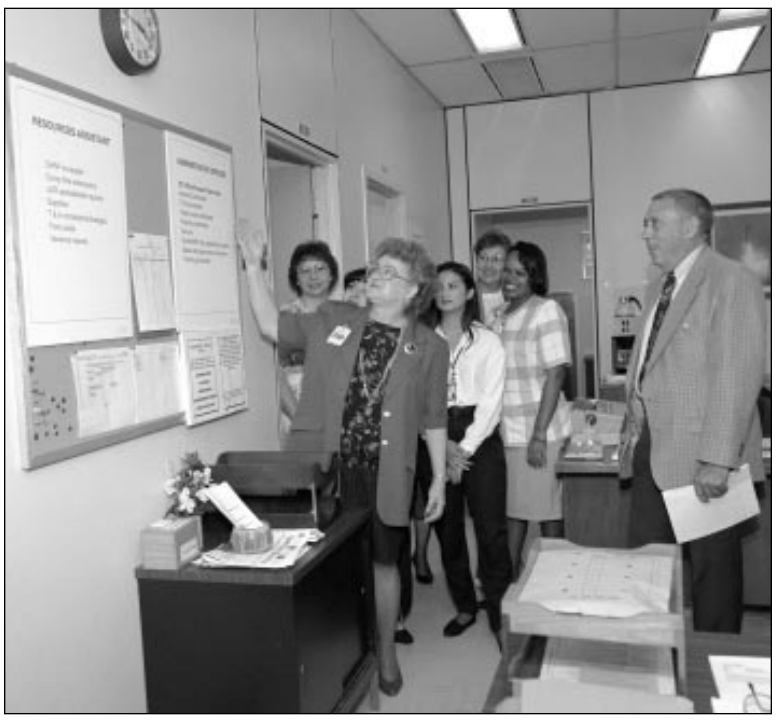

JSC Photo by Robert Markowitz

Above: JSC Director George Abbey talks with the Aeroscience and Flight Mechanics Division Office Support Team about a new pilot program that gives greater flexibility and enhanced office products. From left are Pat Ford, Isabel Elizondo, Earlene Miner, Leticia Arriaga, Jane Smith and Rose Sowell. The team also includes Jeanette Sanelli. Below: From left, Human Resource Director Harvey Hartman and assistant Bob Hall, sign a partnership agreement with the American Federation of Government Employees, Local 2284 Executive Vice President Bridget Broussard-Guidry and President Mary McLain.

Double check clears *Columbia* for STS-78 launch

By James Hartsfield

Late Tuesday, technicians at KSC cleared the way for a Thursday launch of *Columbia* on STS-78 after X-rays of an external tank door primary drive unit showed it in good condition.

Columbia was scheduled for a 9:49 a.m. CDT liftoff Thursday to begin almost 17 full days in orbit, with a Florida landing planned on July 7. Earlier this week, shuttle managers decided to double-check screws in the drive unit on *Columbia* after screws in similar units on Atlantis were found to be loose. The drive units are electric motors that close the external tank doors on orbiter's underside after the empty fuel tank is jettisoned. To check the screws on *Columbia*, workers had to reopen the shuttle's engine compartment and X-ray the units.

Also Tuesday, technicians noted a software error on one master events controller aboard *Columbia*, although the problem was in software not used for STS-78. Engineers still planned to check the problem to ensure the errors would have no effect on the upcoming launch, but the analysis was not expected to interrupt the launch countdown. The master events controllers send commands to separate the solid rockets and external fuel tank during the shuttle's climb to orbit.

The STS-78 crew — Commander Tom Henricks, Pilot Kevin Kregel, Payload Commander Susan Helms, Mission Specialists Rick Linnehan and Charles Brady, French Astronaut Jean-Jaques Favier and Canadian Astronaut Bob Thirsk — arrived at KSC Monday afternoon in preparation for launch. The crew will be keeping hours similar to daytime hours in Houston during the mission.

Elsewhere, *Discovery* will depart Rockwell's Palmdale, Calif., shuttle factory for a ferry flight back to Florida on Tuesday. Weather permitting, the flight will spend Tuesday night in Corpus Christi, arriving there at about 11:30 a.m. CDT. Shuttle and space walking exhibits as well as visits by members of the STS-82 crew, the second Hubble Space Telescope servicing mission and *Discovery*'s next flight, will accompany the stopover.

If the weather remains favorable, *Discovery* will depart Corpus Christi Wednesday morning for Ellington Field, where it will spend about three hours while the Shuttle Carrier Aircraft is refueled before traveling on to Florida.

Space station truss under goes tests

By Kyle Herring

A major segment of the International Space Station, which houses the communications and tracking, attitude stabilization, thermal control, and electrical power distribution systems, successfully completed tests last month in the simulated weightlessness of a special water tank.

Assisted by test and safety divers, astronaut teams simulated procedures during a three week test in the Neutral Buoyancy Simulator at NASA's Marshall Space Flight Center.

The element tested in the water tank was a high fidelity mock-up of the Z-1 truss segment. The centrally located Z-1 truss structure will deploy antennas, provide cooling to laboratory equipment, and bring electrical power to the space station once in orbit.

The tests also evaluated the use of mobility aids, handling of equipment, use of foot restraints and hand holds for space walks during space station truss assembly.

"The test and development of procedures for truss assembly and maintenance mark an important milestone for the Space Station program," said Randy Brinkley, International Space Station Program Manager JSC. "The highly successful work accomplished in the Neutral Buoyancy Simulator is a major milestone in the schedule for the launch of these critical elements of the space station."

"Neutral buoyancy provides an excellent environment for testing hardware designed to operate in space while affording the opportunity to evaluate procedures that will be used in space to assemble structures such as the space station," according to Bill Barnett, test director at the Neutral Buoyancy Simulator.

"By attaching a system of floats and weights, suited subjects or equipment neither sink nor float, making the subjects and equipment neutrally buoyant," said Barnett. "The neutral buoyancy facility provides a realistic simulation of working in space, permitting astronauts to test equipment designs, use of tools and to work through portions of actual mission timelines for assembly of objects in space."

"We tested the design for assembly and maintenance of the space station's electrical power system and the interfaces to the power system," said Ron Lovely, Rocketdyne Manager of Space Operations and Flight Experiments. "Also, we evaluated tasks and equipment which provide power and other necessary functions to make the living and working places on the Station habitable."

"The simulations at Marshall," Lovely said, "are how we find out if we are meeting all the requirements for extravehicular activities or space walks. This series of tests has gone extremely well. We are very excited and pleased about the progress made toward the verification of the station for assembly and maintenance in space."

Lucid writes home about pink socks, Jell-O

(Editor's note: Mir 21 Cosmonaut Researcher Shannon Lucid recently sent a letter home from the Russian Mir Space Station as science work continues to occupy the crew's time. The following is the text of her letter.)

Dear Everybody,

Here it is, another Sunday on Mir. And how, you might ask, do I know that it's Sunday? Easy. I have on my pink socks and Yuri, Yuri, and I have just finished sharing a bag of Jell-O.

When light follows darkness every 45 minutes, it is important that I have simple ways of marking the passage of time. The pink socks were found on STS-76 and Kevin, the commander, said that they were obviously put on as a surprise for me, so I took them with me over to Mir and decided to wear them on Sundays.

And the Jell-O? It is the greatest improvement in space flight since my first flight over ten years ago. When I found out that there was a refrigerator on board Mir, I asked the food folks at JSC if they could put Jell-O in a drink bag. Once aboard Mir, we could just add hot water, put the bag in the refrigerator and, later, have a great treat.

Well, the food folks did just that and sent a variety of flavors with me to try out. We tried the Jell-O first as a special treat for Easter. It was so great that we decided the Mir 21- NASA 2 crew tradition would be to share a bag of Jell-O every Sunday night. Every once in a while, Yuri will come up to me and say, "Isn't today Sunday?" and I will say "No, it's not. No Jell-O tonight."

There have been a lot of changes here on Mir since I arrived. And no, the changes were not because I am here.

The first big change was the arrival of Priroda, the final segment that is to be added to Mir. This segment is called Priroda because that's the Russian word for nature and there are sensors on the outside of the segment to study the earth. The US science equipment is located inside this segment.

As a graduate student years ago, I fantasized about having my own laboratory. I must admit, though, that in none of my fantasies was I gazing out the window of a space station watching "my laboratory" approach like a gigantic silver bullet moving in slow motion toward the station's heart. Reality is indeed stranger than fiction.

There had been a power problem on Priroda after its launch, so there was some concern about leaking from the batteries into the atmosphere. When it arrived, we had to wait and check out the air quality before opening the hatch. Yuri checked the air and pronounced it good. After listening to the hissing air as the atmospheric pressure was equalized between Priroda and Mir, the hatch was opened. And yes, it was a dramatic moment.

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